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EXAMINER	
SINGH, DALZID E	

ART UNIT	PAPER NUMBER
2613	

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Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary	Application No.	Applicant(s)	
	09/930,421	TERNULLO ET AL.	
	Examiner	Art Unit	
	Dalzid Singh	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,29-33,43-48 and 58-85* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *85* is/are allowed.

6)☒ Claim(s) *1,2,7-11,29-33,43-47,58,70 and 74-84* is/are rejected.

7)☒ Claim(s) *3-6,48,59-69 and 71-73* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 7, 8, 29-32, 43-47, 58, 70 and 74-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US Pub. No. 2003/0053177) in view of Freitas et al (US Patent No. 5,321,542).

Regarding claim 1, Kawamura discloses transmitter for use in a network carrying a plurality of data bits, as shown in Fig. 11, said transmitter comprising:

a physical layer (1s or 1r);

a first link layer (1C);

means for providing at least a subset of said plurality of data bits (it is well known that data bit is provided for the communication device of Kawamura; see paragraph [0061]);

means for making said first link layer match a second link layer in a device (the device (a) comprise of data link layer in at least one device within a broadcast coverage area of said transmitter (1Ca) which is match to the first link layer(1C); see paragraph [0147 to 0148; 0158 to 0159]; it is well known that the device must be within broadcast area in order to receive transmitted signal);

means for making said at least said subset of said plurality of data bits available to said first link layer (it is well known that data bits is available for the first link layer);

means for making said at least said subset of said plurality of data bits available to said first physical layer (the data bits is transmitted therefore it is available to the physical layer);

means for generating a signal comprising said at least said subset of said plurality of data bits (the system generated infrared signal ; see paragraph [0153]); and

means for transmitting said signal to said device in a format compliant with and receivable by said second link layer (the signal is transmitted to a device; see paragraphs [0179-0182]).

Kawamura shows wireless communications between different devices such as (a,b,c,d) and differs from the claimed invention in that Kawamura does not specifically disclose that the device is a handheld device. Freitas et al teach wireless data link in which the device is handheld (see col. 1, lines 9-18). Therefore, it would have been obvious to provide wireless data communication to a handheld device. One of ordinary skill in the art would have been motivated to do this in order to provide data to portable communication devices.

Regarding claims 2, 30, 45 and 46, as disclosed in paragraphs [0179-0182], Kawamura discloses the matching first and second link layers are infrared data association (IrDA) compliant.

Regarding claims 7 and 31, on paragraph [0153] Kawamura discloses that the signal is an infrared signal.

Regarding claims 8 and 32, in paragraph [0006], Kawamura discloses that the diffuse infrared signal is well known, therefore it would have been obvious to an artisan of ordinary skill in the art provide wireless data communication using a diffuse method.

Regarding claim 58, as discussed above, Kawamura disclose bi-directional communication and differ from this claim in that Kawamura does not teach unidirectional communication. However, it would have been obvious to an artisan of ordinary skill in the art to provide unidirectional communication system. For example, the communication system of Kawamura could be modified such that the system only transmit and does not receive, therefore providing unidirectional communication.

Regarding claim 74, Kawamura discloses transmission of infrared signal and does not specifically disclose the modulating an electric light. However, it is well known that in transmitting data using optical signal, electrical data signal is modulated with an optical carrier and thus forming optical signal.

Regarding claim 29, Kawamura discloses transmitter for use in a network carrying a plurality of data bits, as shown in Fig. 11, said transmitter comprising the steps of:

formatting said at least a subset of said plurality of bits into a data signal (frame analysis can be considered as formatting; see paragraph [0145]);

making said data signal available to a second link layer (1Ca) compatible with said first link layer (1C) (see paragraphs [0179-0182]);

receiving said data signal at a second physical layer (1ra); and

making said data signal available to a transmitter for conveying to said communication interface (see paragraphs [0179-0182]);

Kawamura shows wireless communications between different devices such as (a,b,c,d) and differs from the claimed invention in that Kawamura does not specifically disclose that the device is a handheld device. Freitas et al teach wireless data link in which the device is handheld (see col. 1, lines 9-18). Therefore, it would have been obvious to provide wireless data communication to a handheld device. One of ordinary skill in the art would have been motivated to do this in order to provide data to portable communication devices. Furthermore, it is well known that the device must be within broadcast area in order to receive transmitted signal.

Regarding claim 70, Kawamura discloses the steps of receiving said data signal at a first physical layer (1s) communicatively associated with said communication interface to form a received signal; passing said received signal from said first physical layer to said first link layer (1C); extracting information contained in said received signal (see paragraph [0145-0148]); and making said information available to a user of said handheld device.

Regarding claims 75 and 79, shown in Fig. 11, Kawamura show one computer node (1000) for carrying out the method according to claim 29.

Regarding claims 76 and 80, shown in Fig. 11, Kawamura shows one live communications network comprising at least one computer node (1000) according to the method of claim 29.

Regarding claims 77 and 81, shown in Fig. 11, Kawamura shows data signal embodied in electromagnetic signals traveling over at least one live communications network carrying information capable of causing at least one computer node in said at least one live communications network to practice the method of claims 29.

Regarding claims 78 and 82, shown in Fig. 11, Kawamura shows at least one computer readable medium having instructions embodied therein for the practice of the method of claim 29.

Regarding claim 43, Kawamura discloses transmitter for use in a network carrying a plurality of data bits, as shown in Fig. 11, said transmitter comprising the steps of:

making a first link layer (1C) in said transmitter match a second link layer (1Ca) in said handheld device (see paragraph [0145-0148]);

providing said at least said subset of said plurality of data bits (it is well known that data bit is provided for the communication device of Kawamura; see paragraph [0061]);

making said at least said subset of said plurality of data bits available to said first link layer;

receiving said at least said subset of said plurality of data bits at a first physical layer (1s) in said transmitter;

generating an infrared signal comprising said at least said subset of said plurality of data bits (see paragraph [0153]); and

conveying said infrared signal to a communication interface associated with said device in a format compliant with and receivable by said second link layer (1Ca); (see paragraph [0145-0148]);

Kawamura shows wireless communications between different devices such as (a,b,c,d) and differs from the claimed invention in that Kawamura does not specifically disclose that the device is a handheld device. Freitas et al teach wireless data link in which the device is handheld (see col. 1, lines 9-18). Therefore, it would have been obvious to provide wireless data communication to a handheld device. One of ordinary skill in the art would have been motivated to do this in order to provide data to portable communication devices. Furthermore, it is well known that the device must be within broadcast area in order to receive transmitted signal.

Regarding claim 44, as shown in Fig. 11, Kawamura show that the communication interface is a bi-directional communication interface.

Regarding claim 83, Kawamura discloses transmitter for use in a network carrying a plurality of data bits, as shown in Fig. 11, said transmitter comprising:

a diffuse infrared protocol physical layer (1s or 1r);

a transmitter infrared-data-association (IrDA)-compliant link layer (1C) having electronic communication with said diffuse infrared protocol physical layer (see paragraphs [0179-0182]);

means for providing at least a subset of said plurality of data bits (it is well known that data bit is provided for the communication device of Kawamura; see paragraph [0061]);

means for making said at least said subset of the plurality of data bits available to said transmitter IrDA link layer (the device (a) comprise of data link layer in at least one device within a broadcast coverage area of said transmitter (1Ca) which is match to the first link layer(1C); see paragraph [0147 to 0148; 0158 to 0159]; it is well known that the device must be within broadcast area in order to receive transmitted signal);

means for making said at least said subset of said plurality of data bits available to said diffuse infrared protocol physical layer (it is well known that data bits is available for the first link layer);

means for generating a signal at said diffuse infrared protocol physical layer comprising said at least said subset of said plurality of data bits (the system generated infrared signal ; see paragraph [0153]); and

means for transmitting said signal to said device in a format compliant with and receivable by device IrDA-compliant protocol at physical and link layer (the signal is transmitted to a device; see paragraphs [0179-0182]).

Kawamura shows wireless communications between different devices such as (a,b,c,d) and differs from the claimed invention in that Kawamura does not specifically disclose that the device is a handheld device. Freitas et al teach wireless data link in which the device is handheld (see col. 1, lines 9-18). Therefore, it would have been obvious to provide wireless data communication to a handheld device. One of ordinary skill in the art would have been motivated to do this in order to provide data to portable communication devices.

Regarding claim 84, Kawamura discloses transmitter for use in a network carrying a plurality of data bits, as shown in Fig. 11, said transmitter comprising the steps of:

formatting said at least a subset of said plurality of bits into a data signal (frame analysis can be considered as formatting; see paragraph [0145]);

making said data signal available to a source device IrDA-compliant link layer ((1Ca) compatible with said first link layer (1C) see paragraphs [0179-0182]);

receiving said data signal at a source device diffuse infrared protocol physical layer form the source device IrDA-compliant link layer (1ra); and

making said data signal available to a transmitter for conveying to said communication interface (see paragraphs [0179-0182]);

whereby the at least a subset of the plurality of bits is conveyed to the handheld device through the communication interface and the device IrDA-compliant link layer.

Kawamura shows wireless communications between different devices such as (a,b,c,d) and differs from the claimed invention in that Kawamura does not specifically disclose that the device is a handheld device. Freitas et al teach wireless data link in which the device is handheld (see col. 1, lines 9-18). Therefore, it would have been obvious to provide wireless data communication to a handheld device. One of ordinary skill in the art would have been motivated to do this in order to provide data to portable communication devices. Furthermore, it is well known that the device must be within broadcast area in order to receive transmitted signal.

3. Claim 9, 11 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US Pub. No. 2003/0053177) in view of Freitas et al (US Patent No. 5,321,542) and further in view of Zaudtke et al (US Patent No. 6,654,816).

Regarding claims 9 and 47, the combination of Kawamura and Freitas et al discloses infrared communication system and differs from the claimed invention in that the combination does not disclose that the signal has a wavelength in the range of substantially 850 nanometers to 1250 nanometers. Zaudtke et al is cited to show infrared communication system using wavelength in the range of substantially 850 nanometers to 1250 nanometers. In col. 11, lines 17-31, Zaudtke et al teach the use of infrared light at approximately 980 nanometer wavelength. Therefore, it would have been obvious to an artisan of ordinary skill in the art to provide wavelength in the range of substantially 850 nanometers to 1250 nanometers.

Regarding claim 11, Kawamura discloses transmission of infrared signal and does not specifically disclose the modulating an electric light. However, it is well known that in transmitting data using optical signal, electrical data signal is modulated with an optical carrier and thus forming optical signal.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US Pub. No. 2003/0053177) in view of Freitas et al (US Patent No. 5,321,542) in view of Zaudtke et al (US Patent No. 6,654,816) and further in view of Inoue et al (US Pub. No. 2004/0077351).

Regarding claim 10 (as far as understood), the combination of Kawamura, Freitas et al and Zaudtke et al discloses infrared communication system between devices using markup language such as HTML (see col. 13, lines 3-23 of Zaudtke et al). The combination differs from the claimed invention in that the combination does not disclose the use of an XML as part of the signal. Inoue et al is cited to teach the use of XML (see paragraph [0136]). Therefore, it would have been obvious to an artisan of rodinary skill in the art at the time the invention was made to provide XML to the system of the combination in order to identify type of packet used in data transfer.

5. Claim 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US Pub. No. 2003/0053177) in view of Freitas et al (US Patent No. 5,321,542) and further in view of Inoue et al (US Pub. No. 2004/0077351).

Regarding claim 33, the combination of Kawamura and Freitas et al discloses infrared communication and differs from the claimed invention in that the combination does not disclose the use of an XML element as part of the signal. Inoue et al is cited to teach the use of XML (see paragraph [0136]). Therefore, it would have been obvious to an artisan of rodinary skill in the art at the time the invention was made to provide XML to the system of the Kawamura in order to identify type of packet used in data transfer.

Allowable Subject Matter

6. Claim 85 is allowed.

7. Claims 3-6, 48, 59-69 and 71-73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 31 August 2006 have been fully considered but they are not persuasive.

On page 16-17 of the remark, applicant indicates the possible filling of affidavit under 37 C.F.R. 1.131 to swear behind Zaudtke. Applicant has the right to file such affidavit, however, Zaudtke is provided merely for the teaching of specific wavelength range as cited in claims 9 and 47. Providing wireless communication within such range

of wavelength is well known. There are numerous other references which provide such teaching. By filling affidavit 1.131 to overcome Zaudtke will not make these claims allowable.

On page 18 of the remark, applicant argues that combining Freitas with Kawamura would render Kawamura unsatisfactory for its intended purpose because Kawamura specifically rejects the use of the diffusion type communication method. In the combination, Freitas is provided for the mere teaching of using a handheld in a wireless data communication system. In free-space communication system, it is well known that light beam (infrared beam) transmitted from its source will diffuse across the free-space medium. Diameter of such light beam increases as the distance from its source increases. Therefore, it is inherent that light beam or infrared signal diffuses in a free space communication system. Kawamura discloses direct emission type communication system as cited in paragraphs [0010 and 0011], however, Kawamura does not disclose that such emission type is not diffused, such characteristic of light beam is inherent.

On page 19 of the remark, with regard to claim 58, applicant argues that Kawamura does not disclose or suggest a unidirectional signal because Kawamura states that several signals such as requests, indications, responses and confirmations are exchanged between the data link control sections and repeater section. Since Kawamura teaches that it is possible for bi-directional communication, therefore, it

would have been obvious to an artisan of ordinary skill in the art to provide unidirectional signal.

On the remark, with regard to claim 70, applicant argues that nowhere do either Kawamura or Freitas disclose or suggest making said information available to a user of said handheld device. The claim was rejected based on combination of Kawamura and Freitas. Freitas is cited to teach transmitting of data signal to handheld device. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

On the remark, with regard to claims 75-77 and 79-81, applicant argues that Kawamura discloses neither applicant's claimed computer node nor applicant's claimed line communication network because Kawamura's repeater apparatus receives infrared radiation, then converts it to an electrical signal. The claims refer to computer as a general term and do not specifically defined such term. Therefore, in the rejection computer is interpreted as device which accepts and processes information. The repeater system of Kawamura accepts and process information. Therefore, it would have been obvious to indicate the repeater system of Kawamura as computer or computer node.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
November 3, 2006

David Singh